THE SCIENTIFIC AMERICAN.

THE ADVOCATE OF INDUSTRY AND ENTERPRISE, AND JOURNAL OF MECHANICAL AND OTHER IMPROVEMENTS.

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THE SCIENTIFIC AMERICAN,
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RUFUS PORTER,—Editor.

Each number of this paper is furnished with from two to five ORIGINAL ENGRAVINGS, many of them elegant, and illustrative of NEW INVENTIONS, SCIENTIFIC PRINCIPLES, and CURIOSITIES; and contains as much Interesting Intelligence as six ordinary daily papers, consisting of notices of the progress of Mechanical and other Scientific Improvements,—American and Foreign Inventions Catalogues of American Patents,—Scientific Essays, illustrative of the principles of the Sciences of MECHANICS, CHEMISTRY, and ARCHITECTURE;—Instruction in various Arts and Trades, -Curious Philosophical Expements;—Miscellaneous Intelligence, Poetry and, occasionally, Music.

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TERMS OF ADVERTISING.—For 10 lines, or less, 50 cents for the first, and 12 1-2 cents for every subsequent insertion.

Signs of Rain.

[The following is said to have been composed by Dr. Jenner, as an excuse for not accepting the invitation of a friend to make an excursion with him:]

1. The hollow winds begin to blow,
2. The clouds look black, the grass is low,
3. The soot falls down, the spaniels sleep,
4. And spiders from their cobwebs peep.
5. Last night the sun went pale to bed,
6. The moon in halos hid her head;
7. The boding shepherd heaves a sigh,
8. For, see, a rainbow spans the sky.
9. The walls are damp, the ditches smell,
10. Clos'd is the pink-eyed pimpernell.
11. Hark! how the chairs and tables crack,
12. Old Betty's joints are on the rack;
13. Loud quack the ducks, the peacock's cry;
14. The distant hills are looking nigh.
15. How restless are the snorting swine,
16. The busy flies disturb the kine;
17. Low o'er the grass the swallow wings;
18. The cricket, too, how sharp he sings;
19. Puss on the hearth with velvet paws,
20. Sits, wiping o'er her whiskered jaws.
21. Through the clear stream the fishes rise
22. And nimbly catch the incautious flies;
23. The glow-worms, numerous and bright,
24. Illum'd the dewy dell last night.
25. At dusk the squalid toad and seen,
26. Hopping and crawling o'er the green;
27. The whirling wind the dust obeys,
28. And in the rapid eddy plays;
29. The frog has changed his yellow vest,
30. And in a russet coat is drest.
31. Though June, the air is cold and still:
32. Uhe mellow blackbird's voice is shrill.
33. My dog, so altered in his taste,
34. Quits mutton bones on grass to feast;
35. And see, yon rooks, how odd their flight,
36. They imitate the gliding kite,
37. And seem precipitate to fall—
38. As if they felt the piercing ball.
39. 'Twill surely rain, I see with sorrow;
40. Our jaunt must be put off to-morrow.

Romance and Reality; or, the Poet AND HIS SERVANT.

Poet.—How soft the gentle zephyr breathes
Among the single trees—

Serv.—Confound that plaguy north-east wind,
Oh! how it makes me wheeze.

Poet.—The thrush from yonder waving birch
Pou.s out his mellow note—

Serv.—I wish I had a rifle here
To stop that fellow's throat.

Poet.—The robin carols forth his lay
From every shady nook—

Serv.—Lord what a noise those bull frogs make,
A squawking in the brook.

Poet.—How sweet 'mid Nature's works to rove
In the hours of opening spring—

Serv.—I cannot think what in the world
Could here my master bring.

Poet—How green the turf beneath my feet,
And moist with evening dew—

Serv.—This swamp is filled with cranberry vines
And some skunk cabbage too.

Poet.—How rich the perfume of the flowers
That float upon the air—

Serv.—There now I stept upon a leaf,
The smell I cannot bear.

Poet.—The stream leaps merrily along
Like a young child at play—

Serv.—My master'll get into the mud,
If he goes far that way.

THE EDITOR'S ADVICE to his youthful readers is,—Read books which contain real, solid information, thouth they may appear dry at first. Don't spend your time poring over the miserable cheap novels so plenty at the present time. The more you read them the bigger fool you will be. They are unworthy the attention of an intelligent being, and are the great drawback upon the intellectual advancement of the young. One old musty history, which can be found in almost any house, is worth more than the whole of them.

MACHINE FOR CLEANSING WHEAT

Fig. 1.

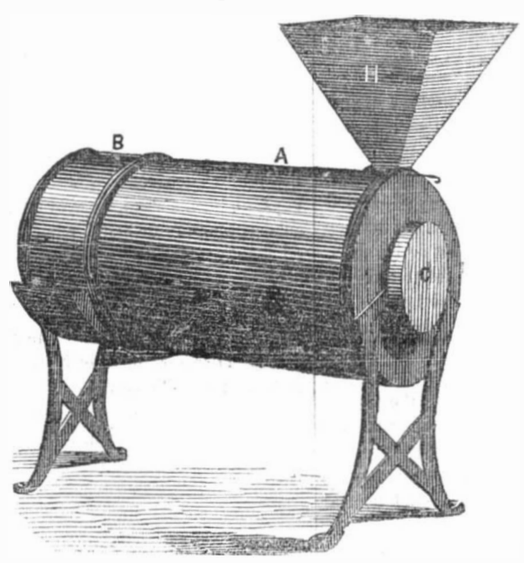
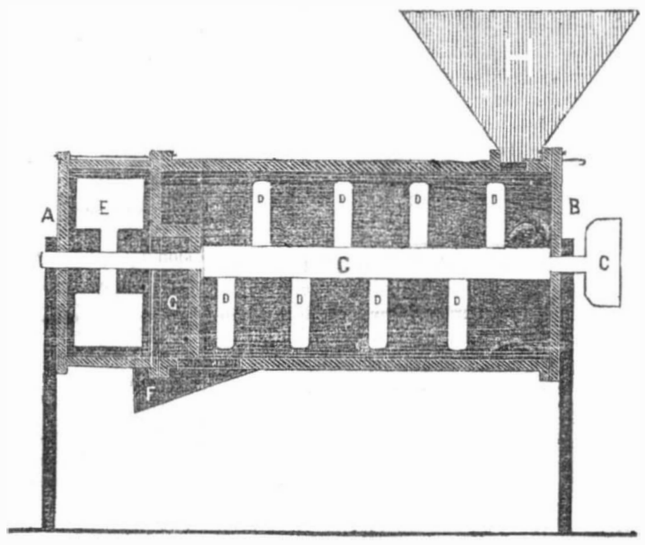


Fig. 2.



EXPLANATION, ETC.—This machine, which has been recently invented, and is now in successful operation, is calculated for cleansing wheat or other grains, from smut, earth, and all other extraneous matter that may adhere to the kernels of the grain. Fig. 1 is a perspective view of the exterior of the machine, and fig. 2 is a sectional side view, showing the construction and arrangement of the interior. The body of the machine consists of a cast iron cylinder, A B, thirty inches long (including the fan box) and one foot in diameter. A cast iron shaft passes through the centre of the cylinder, having its bearings in the cylinder heads, and a band wheel, C, on one end thereof, whereby it is put in motion. From this shaft a series of arms or *beaters*, D D, &c., project in different directions, and near the end opposite the band wheel, four arms with fans, E E, also project from the centre shaft, and when in motion have the effect to drive off from the grain whatever smut or dust has been detached from the grain by the operation of the beaters. This cylinder is supported at two or three feet elevation from the ground, by pairs of cast iron legs, attached to each end of the cylinder, as shown in fig. 1; and one end supports a hopper, H, which receives the grain and conducts it to the beaters, and the grain progresses gradually to the discharging vent, F; the hopper end of the machine being a little elevated for the purpose of facilitating the progress of the grain, and the beaters are made slightly oblique for the same purpose. Both the induction and eduction of the grain, are regulated by small horizontal sliding gates, not represented in the engraving; and the motion of the beaters is such as to cleanse the grain without breaking it. The fan-wheel apartment is a section of cylinder, cast separately, and is separated from the beating apartment by a cylinder head or partition in which is a vertical flue, G, eight inches by four, and extending from the discharging vent, up to the vicinity of the shaft: so that when the fans are in motion they produce a strong draught of air upward through the flue, which thoroughly separates the dust from the grain, and the dust is thrown out by the wheel, through a large vent for that purpose, on the back or rear side of the cylinder, (not represented,) while the cleansed grain is conducted to the box or vessel prepared to receive it. This excellent machine was invented by Mr. Owen Dorsey, of Maryland, who intends to procure a patent therefor. The cost of a machine is about $25.

OLD BACHELORS.—We have often thought of writing a chapter upon old bachelors, setting forth their inhumanity, their unnaturalness, the countless miseries they bring upon themselves and pointing out the only true method by which they can redeem themselves from the charge of selfishness, and become useful members of society. We believe the majority of them merit our pity rather than our hatred. If they are, as we fear, more conceited, cross, crabbed, and crusty, than the rest of their species, it is because the very peculiarity of their condition makes them so; and if they cling with pitable tenacity to their lonely lot, it is because they have not a realizing sense of its wretchedness, and have never dreamed of the joys of connubial life. Let us, then, look on them with compassion—for, as an eloquent writer touchingly says:—"In the vast flower field of human affection, the old bachelor is the very scarecrow of happiness, who drives away the old birds of love that come to steal hemlock seeds of loneliness and despair.—Where is there a more pitiable object in the world than a man who has no amiable woman interested in his welfare? How dismal does his desolate room appear when he goes home at night, wet and hungry, and finds a cold hearth or barren table, and a lonely pillow, and looks like the white urn of every earthly enjoyment! See the sick old bachelor in the afternoon of life, when his heart is sinking to sundown. Not a solitary star of memory gleams over the dusk of his opening grave—no tender wife to bend like a blessing over his dying bed—no fond daughter to draw his chill hand into the soft pressure of hers, and warm his icy blood with the vivifying fires of unfailing affection—no manly boy to link his name with the golden chain of honorable posterity and bind his history in the vast volume of the world he is leaving forever. He has eaten and drunken and died, and earth is glad to be rid of him, for he has done little else but cramp his soul into the circumference of a sixpence, and no human one but his washer-woman will breathe a sigh at his funeral.—*Factory Girl's Album.*

A DOG STORY.—One of the light fingered gentry lately succeeded in abstracting a valuable gold watch from a gentleman who was the owner of a most sagacious dog. The animal, having observed the theft, at once renounced his old master, whose companion he had been for years, and in spite of all coaxing and entreaties, followed the pickpocket. His new master was delighted, and, on retiring for the night, took puppy to his sleeping-room. The rogue, having put aside his dress, placed the watch snugly in his pantaloons pocket, and rolled himself in the blankets. But no sooner was he in bed, than the dog which had watched his operations with a great deal of anxiety, seized the pants, and with one spring jumped through the window, and made for his old home, leaving the thief minus both watch and pants.

THE DIFFICULTY OF SUPPRESSING VICE.—A notorious gambler was indicted in a Western court, for keeping a faro table; but could not be convicted because the judge and most of the jury had been playing at the same table. On the same principle may be found the difficulty of procuring and enforcing wholesome laws against the nefarious abominations practiced openly in this Gotham—the officers of Police are too much interested in the game.

INDIA RUBBER BRIDGES.—The announcement that Government were about contracting with certain individuals for supply of India Rubber Bridges for the army excited considerable curiosity as to the mode of constructing so singular an article.—It appears that a bridge of this material was invented some ten years since and used during the Creek war in Alabama. The following is a description of it:—It consisted of large bags or pontons something like cotton bags in shape, made of India Rubber cloth, which being filled with air and attached laterally together, formed a bridge of 14 feet in width and of any length, according to the number of bags used; upon these were laid light timbers to support boards placed laterally, which forming a smooth level surface, admitted the passage of wagons, horses, &c. A detachment of 600 men with all their arms and accoutrements, including the field officers mounted upon horses, marched upon it at once, and ofen remaining a quarter of an hour going through the evolutions to test its strength, they counter-marched with as much facility as if on terra firma. Field pieces, with their complement of matrosses, and their caissons filled with ammunition, and loaded wagons were also driven over it with the same ease. It was said that a troop of horse arriving at night at a river where this bridge was, and seeing it stretching across the stream, crossed upon it under the impression that it was a common bridge. The great advantage of this bridge is its entire portableness, all the pontons and cordage for a bridge of 350 feet being capable of transportation in a single wagon; whereas the former ponton equipages consisted of cumbrous and bulky pontons of wood, sheet iron and copper.

MUSIC PRODUCED FROM GAS.—Into a glass globe put some small chips or pieces of iron and sulphuric acid, diluted with five or six times its weight of water. The acid may be poured upon the iron by means of a funnel. Fitted into the cock is a glass tube a quarter of an inch in diameter, and having its upper extremity drawn out to a capillary bulb. By setting fire to the hydrogen gas which escapes from this extremity, a continued current or jet of flame is produced, which may then be allowed to pass into a jar, either of glass, or earthern-ware or metal. If the tube be not too large, the flame becomes smaller as it is depressed, and when the tube covers the flame to a considerable depth, very clear sounds are produced; but on the contrary, if the tube be to narrow, the flame will be extinguished, and in proportion as the tube is enlarged, the sound diminishes, so that there is a certain limit at which it totally ceases.

CHEAT ON BOTH SIDES.—A funny bit of scandal turned up a few days since at the 'west end' of the the city. A teamster up in them diggins, not long since, took to himself a wife. Soon it leaked out that the man had another wife living somewhere.—At this discovery the new wife was becomingly indignant, and was making preparations for a *prolonged fuss*—when lo! shocking to relate—in stepped a long absent sailor and claimed the woman as *his* wife! which turned out to be the fact. The teamster *retrogaded.* Finally some friends came forward, 'bo't out' the sailor, and settled matters with the other woman, and now the loving pair are together again. This partakes somewhat of the romantic, but it is nevertheless true.—*Vox Populi, Lowell.*

ANIMAL FLOWER.—Reader, it is not of pretty ladies that we speak! They *are* animal flowers, and pretty *poseys* they are to be sure. They beautify the earth, and make it pleasant to endure life. On the Island St. Luce there is a cavern in which is a large basin twelve or fifteen feet deep, in the bottom of which are rocks. From these rocks proceed certain substances which present at first sight beautiful flowers, resembling our marigolds, only that their tint is more lively. These seeming flowers on the approach of a hand or instrument, retire like a snail, out of sight! On close examination there appears, in the middle of a disk, filaments resembling spider's eggs, which move briskly round a kind of petals. These filaments or legs have pincers to seize their prey, when the petals close, so that it cannot escape. Uuder this flower is the body of an animal, and it is probable he lives on marine insects thrown by the sea into this basin.—*Cin. Post.*

INVENTION OF SPECTACLES.—The discovery of spectacles, one of the first and one of the most useful optical instruments ever brought into general use, seems to have been made about the end of the thirteenth century. It is obvious from the writings of Roger Bacon, published a little before that period, that spectacles were unknown in his time; and soon after the beginning of the fourteenth century they appear to have been in general use. The common and most probable opinion is, that they were discovered in Italy, and Manni informs us that they were invented by a Florentine, called Salvino degl'Armati. He even quotes an inscription on a tomb at Florence, which seems to leave no doubt of the fact. This inscription is as follows: "Qui diace Salvino d'Armato degl'Armati, Firenze, inventor di egl' Occhiall, anno 1317." Here lies Salvino d'Armato degl' Armati, a Florentine, the inventor of spectacles, who died in 1317.

COL. BENTON AND THE 54 40s.—A capital thing was said by Col. Benton, a few days ago, to a distinguished Whig Senator, which should not be allowed to perish. They were discussing the effect of the Oregon compromise upon the fifty-four forties, and the policy which that division of the democratic party had pursued. 'Sir,' said Col. Benton, 'when you were a boy, your mother made you read the good book. I fear both of us have not paid that attention we ought, since we have been left to our own guidance. But you will remember a passage of a man being delivered of certain devils—seven I believe. They were cast into swine and the swine ran down a steep place into the sea and were drowned. There is no account that the devils were drowned, and the last time they appeared was in the shape of these fifty-four forties. Now, though they have been killed off, the devils still survive, and at some future period they will develope themselves in a new party.'

WHAT WE COULD DO.—From an official report submitted to Congress in 1845, the number of men in the United States, from 18 to 45 years of age, fit to do military duty, and fully armed and equipped, was 1,778,333, exclusive of uniform companies, fire companies, and citizens and enrolled, (about 1,500,000,) making an available force of 3,250,000, which could be called into service, in case of an emergency, in thirty days.

ALPHABETICAL LIST OF PATENTEES FOR 1845.

(Concluded from No. 41.)

William F Senior, New York.
Pierpont Seymour, East Bloomfield, NY.
Geo W Shaw, Thompson, Conn.
Samuel Shearer, Big Prairie, Ohio.
W H Shecut, & H H Day, New York.
Frederick E Sickels, New York.
Thomas D Simpson, Norwich, Conn.
Wm Y Singleton, Springfield, Ill.
P F Slane and J Golding, East Cambridge, Mass.
Benj Singerland, Paterson, NJ.
Joseph Slocum, Syracuse, NY.
Jabez Smith, Petersburg, Va.
John Cutts Smith, Chelsea, Mass.
Theophilus Smith, Galway, NY.
Benj M Smith, Massillon, Ohio.
Ira Smith, Chagrin Falls, O.
Snow, Cheney, & T N Sadler, Spencer, Mass.
Simeon Snyder, Dayton, Ohio.
Thomas S Speakman, and Richard A Stratton Philadelphia.
R H Springsteed, Wooster, Ohio.
John J Springsteen, Oswego, NY.
Daniel S Stafford, Rochester, Ill.
Henry Stanley, Poultney, Vt.
Nehemiah P Stanton, Syracuse, NY.
Benj Starbuck, assignee of Anson Atwood, design, Troy.
Thomas W Starr, Philadelphia.
Sylvanus B Stilwell, Brooklyn.
Milton W Stilwell, Plainfield, N Y.
D C Stone, Warwarsing, NY.
Henry Stone, design, Poultney, Vt.
Chester, Stone, and Geo. S Collins, Ravenna, O.
Benjamin Suits, Chittenango, NY.
Samuel Swett, jr. New York.
Benjamin Swett, Mt. Morris, NY.
Beriah Swift, Washington, NY.
Christopher Suydam, Lambertsville, NJ.
Wm Taintor and Harlow Sorton, Porter Co., Ind.
Samuel Talbott, Richmond, Va.
George R Talley, Westbrook, NC.
J Tatham and D Cheetham, Rochdale, Eng.
Saml Taylor and A R Davis, Cambridge, Mass.
W H Taylor, and A P Norton, Rochester, N Y.
Oliver, Dorchester, Mass.
Eli Terry, Plymouth, Conn.
George W Thayer, Springfield, Mass.
A W Thompson, Philadelphia.
Gould Thorp, New York.
R R Trockmorton, Brooklyn.
Charles Thurber, Norwich Conn.
Levi B Thyng, Lowell, Mass.
Theodore R Timby, Cato 4 Corners, NY.
J H Towne, Philadelphia.
Edward S Townsend, Palmyra, NY.
Wm Townsend, Rochester.
William Trapp, jr., Dryden, NY.
Daniel Treadwell, Cambridge, Mass.
Joseph Trump, Connelsville, Pa.
Philos B Tyler, Philadelphia.
Isaac Tyson, jr., Baltimore.
George Upham, Hebron, O.
Jesse Urney, Wilmington, Del.
Grey Utley, Chapel Hill, NC.
Samuel Utter, New York.
Robert B Varden, Baltimore.
Arthur Varnham, London, Eng.
John Waite, Leicester, Mass.
E L Walker, and G W Cherry, Carlisle, Pa.
Samuel S Walley, Charlestown, Pa.
Frederick Walker, W nchester, Va.
Allen Ward, Camden, NJ.
Thomas E Warren, Troy.
Samuel R Warren, Montreal, Can.
John T Warren and E Warren, New York.
Thos C Washburn, Lowell.
Benj Webb, Warren, NY.
Joseph H Webster, Warren, NY.
Joseph H Webster, St Louis, Mo.
Herman Wendt, New York.
Erastus C West, Bradford, Vt.
Clark Wheeler, Little Valley, NY.
E Whelan, Philadelphia.
Solomon Whipple, Albany.
Cosman White, Galway, N Y.
Cullen Whipple, Providence.
Wm White, assignee of G Merrick, New Orleans.
John White, Marshal, Mich.
Andrew Wickart, Green Village, O.
Hugh Wightman, Pittsburg.
Aretus A Wilder, Detroit, Mich.
James M Wilder, Peterborough, N H.
Russell Wildman, Hartford.
Thomas Wiles, Somerset, Ohio.
James D Willoughby, Gettysburg, Pa.
Robert Wilson, Williamsport, Pa.
James Wilson, New York,
John W Wilson, Philadelphia.
John F Winslow, Troy.
Chas Wolf, Cincinnati, O.
Bancroft Woodcock, Wheeling Va.
Enoch Woods, Beloit, W T.
Ferdinand Woodward, Upper Freehold, N J.
Wm Woodworth, Hyde Park, NY.
C J Woolson, Cleveland, O.
Wm M Wright, Pittsburg.
Wm Wright, Rochester.
John Young, West Galway, NY.

GOLD.—A man who is furnished with arguments from the mint, will convince his antagonist much sooner than one who draws them from reason and philosophy. Gold is a wonderful clearer of the understanding; it dissipates every doubt and scruple in an instant; accommodates itself to the meanest capacities; silences the loud and clamorous, and brings over the most obstinate and inflexible. Philip of Macedon was a man of most invincible reason this way. He refuted all the wisdom of Athens, confounded their statesmen, struck their orators dumb, and at length argued them out of all their liberties.

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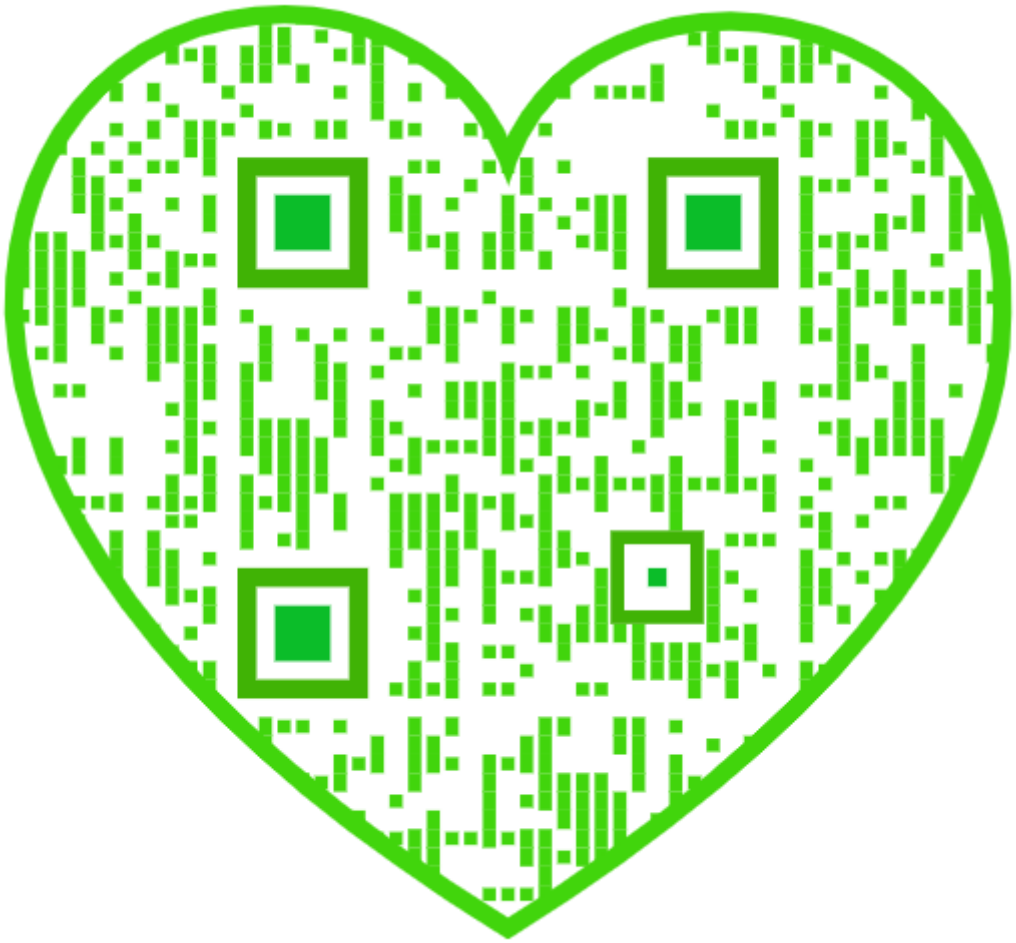
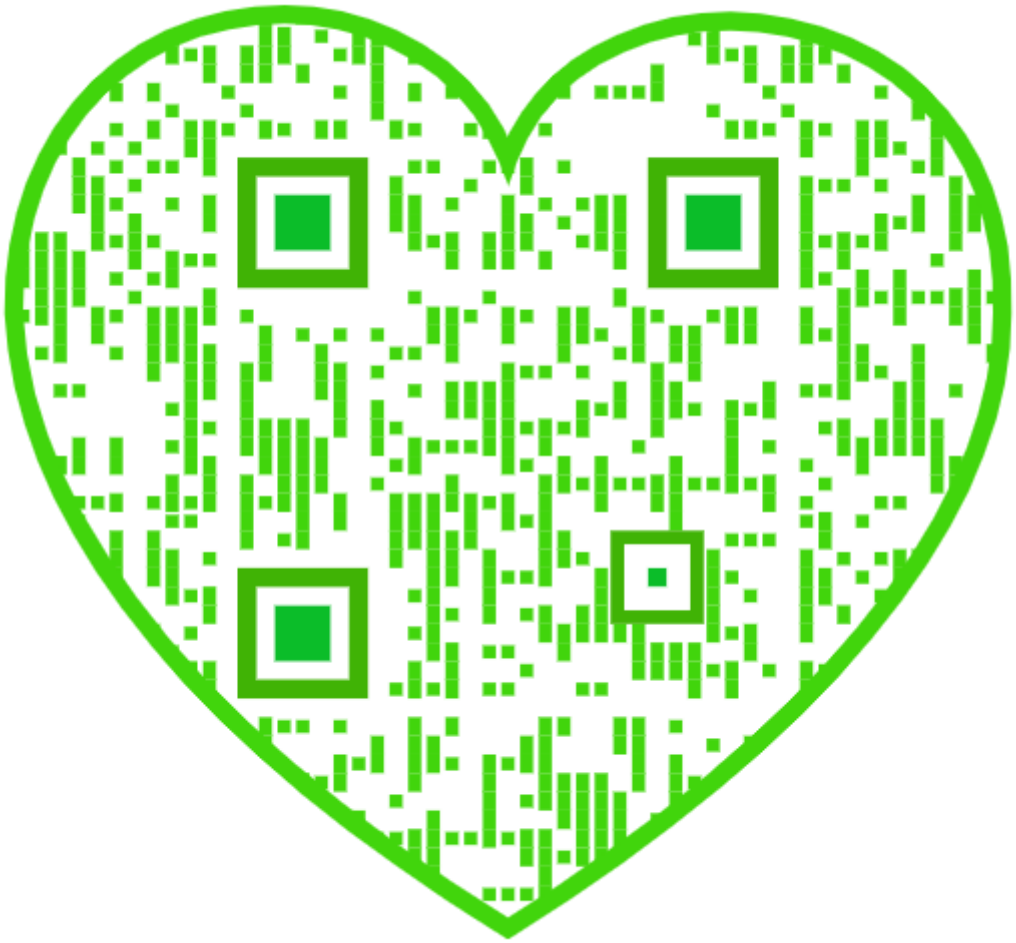




SCIENTIFIC AMERICAN

NEW-YORK, THURSDAY, JULY 9.

Drawings of machinery, engraving on wood, and lithographic drawings, neatly executed, at the lowest prices, at this office.

Post Masters—Who receive this paper, will confer a special favor by mentioning the subject occasionally to scientific mechanics. The aid, also, and influence of all our kind patrons, in extending the notice and circulation of this paper, is most respectfully solicited.

Norwich Subscribers.—Those of our subscribers at Norwich Ct., who have delayed payment of their subscription for the second half year, are respectfully requested to pay the same to our agents Messrs. Safford and Parks, without further delay; they having for some time past, furnished the papers to subscribers on their own responsibility.

To Correspondents.—The favor of T. M. H. of Wilmington, will receive due attention. Perhaps we shall wind him up a few.

We have duly examined the plan of a steam-engine furnished by B. B. L. But it being very similar to many which have been tried and abandoned, and there appearing therein a difficulty unprovided for, we must decline furnishing an engraving of it at present.

The Syphonic Engine by T. H. D., appears to be not sufficiently matured. The principle is evidently a good one, but it will require more invention than we can afford, to arrange and proportion it into a practical form.

Our friend "Yankee," of Providence, is, we presume, in no particular hurry. The weather is too warm for flying at present.

Geological Gleanings in Mississippi.—We have on hand a valuable and original treatise under this head, the publication of which we shall commence next week. To our western patrons it will be peculiarly interesting.

Cruel Parents.—A little girl, being recently found in the streets at midnight, in this city, gave as a reason, that she had not sold all her matches, and that her parents would beat her if she went home without selling all. Another child reported that her mother had sent her begging, and had ordered her not to return without a certain amount of money, which the poor child had not been able to obtain. The old woman wanted money to buy rum. Why do not the city authorities protect the children of intemperate parents?

Proving an Aquaduct.—We have seldom heard of a finer American bull than was recently reported by the Pittsburg Gazette, on the subject of proving the strength of the suspension aquaduct. It seems the natives were both gratified and astonished at the enormous strength of the aquaduct in sustaining the weight of six *heavily laden line boats* at one time. Some of our readers will understand that no more strength is required to sustain an aquaduct with 6 or 20 loaded boats upon it than to sustain the water which would rest upon it if the boats were not there. A wonderful aquaduct truly.

Volcanoes.—There are more than two hundred burning mountains, or volcanoes, on the earth.—These volcanoes are believed to be the chimneys, or vents, by which the gaseous matter escapes that is generated by the internal fires of the earth. According to some geologists, the fires raging in the earth are so intense, that, at a depth of ten miles, the earth is at a red heat; at a depth of twenty miles it is a white heat; and at the depth of fifty miles, the hardest rocks would become liquid!

A Recess extra.—An engine on the Connecticut River railroad, became detached from the passenger train last week, and ran four miles before the engineer discovered the absence of the train. On returning for the train, the passengers were found distributed about the neighborhood of the cars, enjoying the scenery and picking berries, by the road side.

New Steamboats.—Three steamboats are now lying at the St. Louis, Ky., city wharf, all in process of completion, bearing the names of 'Gen. Taylor,' 'Major Ringgold,' and 'Rio Grande.' One to be launched in a few days will be called the 'Rough and Ready.'

Gough at Washington.—A Washington paper says:—'John B. Gough is here giving lectures to crowded audiences,—the people listen attentively—and at the conclusion of one of his discourses, they generally retire to the grog-shops for juleps, and other fashionable beverages.

Fighting on their own hook.—Capt. Lumsden's company of mounted men have proceeded to the Rio Grande without authority or acceptance of the government. Some of the 'Talladejo boys' of Alabama have gone off in the same manner to the camp.

Slave Returned.—A New Orleans paper states that a black fellow who had been liberated from slavery some years ago, and has sojourned in several northern States, recently returned to his former owner, requesting to be received as a slave; he having got tired of his liberty.

Very Liberal.—A Vermont editor advertises that there are lots of beautiful girls promenading the principal street of his village, and that any person who will subscribe for his paper and pay in advance, may have the privilege of looking at their pretty faces.

Ages of the Generals.—Gen. Gaines, it is said is about sixty-nine years of age; Gen. Scott about sixty-four; and Gen. Taylor fifty-six.

New Inventions.

An invention somewhat quaint as well as novel has been patented, for the protection of bees against the ravages of the moth. The invention partakes of operating mechanism, and is to be operated by *hens*. The hives are arranged in a tightly joined houses, provided with ventilated doors of wire gause, which are to be regularly shut at night and opened in the morning. The patent was granted for combining, with the door of the bee house *a hen roost* in such a manner that the weight of the fowls going to roost closes the door at night, and by reversed action on their leaving, opens in the morning!

Improvement for Blacksmiths.—An improved article called a *Tew Iron* has been invented and introduced by a Mr. Brown, of Louisville, Ky.—This tew iron conveys to the blast an unbroken column to the centre and under the fire, which thence escaping from every point in a continuous current, produces a steady, vivid and intense heat upon the iron wrought, without any liability to burn or melt, in one part more than another. There is also said to be a great saving of fuel; but as no particular description is given, we can not judge of its merits only through the opinion of others.

Stone Hammering Machine.—A machine has recently been invented by Jacob Jenks, of Illinois, which promises to be a great saving of labor and expense in the building line. The machine, when propelled by the power of three men, dresses in superior style a foot surface in from 35 to 40 seconds, which in the old way would require from 30 to 60 minutes hard labor, and then the work would not be near as well performed. It can be attached to horse, water, or steam power, and can be constructed so as to dress stone of any required size, as rapidly, at least with the attendance of one man, as twelve good stone cutters could perform the same labor. The machines cost from one to two hundred dollars.

Reaping Machine.—A new reaping machine and rake combined, is spoken of in the Chicago Journal, as being superior to anything hitherto introduced. It cuts the grain and deposites it in bundles with speed and accuracy, and with one man to attend it, will cut an acre of grain for every mile travelled by the horse to which it is attached. It was invented by Mr. C. Foster, of Laporte, Ind.

Improved Light.—A French gentleman has invented new and intense light for the use of marine vessels, to prevent accidents at sea. The light is produced by conducting a jet of oxygen through the centre of a hollow wick, to a flame produced by ignited spirits of wine, and suspending a piece of magnesia in the flame. The lantern in which these are placed has a reflector, and the whole is secured against external injury. This light is also recommended for railroad locomotives.

The Pardoning Power.—It appears by a recent report of the Secretary of State, that a large portion of the convicts which have been sentenced to the State Prisons within the last five years, have been pardoned by the different governors of the State. What bargains were made or how much it cost each for his liberty is not reported; but some people take the liberty to suspect that those burglars robbers and swindlers who have been the most successful at their trades, stand the best chance; and it is quite certain that the expense to the state of convicting the whole number—477—must have been considerable, and might as well have been thrown away as to have been used in thus mocking justitce. The number pardoned in 1840 was 55; in 1841,—59; in 1842,—95. 1843,—88. 1844,—85. 1844,—95; in all 477.

The Universal Alphabet, by J. V. W.—We owe our readers an apology for allowing this subject so large a space in our last number, but considering the subject important, and one which is engaging considerable attention at present, we were persuaded to allow the author to tell the whole story in one number. That the English orthography is very imperfect, and requires improvement, is admitted by all; and it is well to have the attention of the public called to the subject; but we are not prepared to decide that the improvements proposed by J. V. W. are so perfect and unexceptionable as to be readily adopted, or meet with general approbation. We shall present our own views on the subject, with illustrations, in a future number.

P.S. Since the above was in type, we have received the communication, which will be found in another column, signed Hesperus,' and which takes up the subject so understandingly, that we could not refuse it a place.

The Army and the War.—Letters from Matamoras represent a rather pleasant state of affairs in that city. The Yankee merchants who have recently established business, are selling various staple articles at less than half the prices formerly charged by the Mexican merchants, and the inhabitants are flocking to buy goods as if they thought it was their last opportunity. The Mexicans appear to be well pleased with their new neighbors, and desire to have the army remain there or to join it in its march to Mexico city. Many of the soldiers are determined to settle in that country.

It is said that Gen. Paredes has left the city of Mexico with an army of 15,000, destined to operate against our forces in Matamoras. Gen. Taylor will have at least 10,000 men, and will be able to meet any force that Paredes can muster. A report is current that Gen. Taylor had received despatches by express, from the Mexicans, suing for peace; but this report wants confirming.

In Arrears.—Through some little oversight of our clerk, one of our subscribers has received several numbers of the "Scientific," beyond the term for which he had paid in advance. Is that you reader? If so, just please to square up the balance, and add another *advance payment*. But, really, we did not think it was you, or we would not have said anything about it.

Foreign News.

The Royal Mail steamer Britannia arrived at Boston on Saturday last, fifteen days from Liverpool. The news by this arrival is not very important, though not uninteresting.

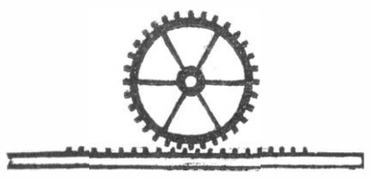
The news of the success of the Americans in the late engagements with the Mexicans, had created much surprise and admiration, some regret but more exultation. There is in Englishmen a feeling of connexion with Americans, and although the first news of the war had produced considerable sympathy for the Mexicans, that sympathy became dissipated when the report of the brilliant victories was received.

The London papers, generally, speak in high terms of praise of the gallantry of Gen. Taylor and the American army, while the Mexicans are looked upon as boisterous and cowardly.

The heat of the weather for a few days had been intense, almost beyond precedent, both in England and in France: many had fallen under what is termed *coup-le-soleil*, or sun-stricken.

There appears to exist in general much good feeling towards this country, and no apprehension of any interference or other occurrence to interrupt the present fair understanding.

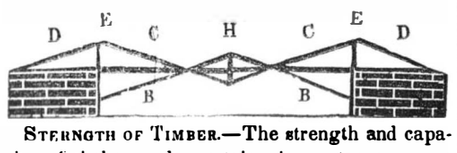
Mechanical Movement.



The Rack and Wheel;—a simple method of converting a rotary to a rectilinear motion, or *vice versa*. The principle of this movement is applied to moving the *carriages* of saw-mills; it is also used in engine-lathes and various other machinery. But as a rack cannot be supposed to be endless, the motion of the wheel or pinion must necessarily be occasionally reversed. The conversion of the rectilinear motion to the rotary, by this method, is less frequently practised, but has sometimes been applied to working drills, which require a reciprocating rotary motion. The rack and pinion has been lately introduced on railroads to enable the engine to ascend hills with its load. In this case, the hub of the wheels constitute the pinions, and the rack-rails being elevated, the rims of the driving wheels are relieved, and their weight is sustained by the racks, thus giving the engine an extraordinary advantage.

Science of Mechanics.

(Continued from No. 41.)



Sternth of Timber.—The strength and capacity of timber under certain circumstances, were briefly shown and explained in our last number.—we shall now proceed to illustrate certain combinations of timber on the principle of braces, and show the capacity thereof as ordinarily applied to the construction of bridges, &c. Suppose the horizontal beam to be of ash or oak ten inches square and fifty feet long, and perfectly united to the beam and to each other at all points of contact. Suppose also that the points at which the braces B, come in contact with the abutments, are ten feet below the beam, and that the elevation of the posts E, is also ten feet: then the braces B, will sustain a weight of about 60,000 lbs each; and the braces C C, with the aid of the braces D D, will sustain a weight of about 120,000 lbs. each: making in all a support of 360 000 lbs. or about 350 tons for a parallel pair of setts of beams and braces. This bridge being thus supported, F F, the centre section would hardly need any connection with the end sections of the bridge, but may merely rest on them as it it would on two piers; yet it is better to have the beams continuous and well spliced. The centre section may have the simple support of four short braces meeting at the post H. It will be seen at a glance that much additional strength may be added by additional braces in different positions; and it seems to be the policy of some bridge makers to combine as many braces in as many different positions as possible; but our object is to show that these few braces, arranged, as here represented, will support more weight in proportion to the quantity of timber, than any other combination, the height of the posts and length of the span being considered. We would not be understood to present this arrangement as the most judicious model for a bridge, but merely to illustrate principles.—The only rational arguments that can be brought up in favor of a series of short braces, crossing and intersecting each other, is that they support each other against trembling and crippling, and that short braces are not so easily crushed as those of greater length. On this account there may be some advantage derived from a combination of long and short braces, or at least of a few vertical and lateral supports to the long braces which contribute support by the crush resistance. But the upper braces which support by the strength of draught, have no occasion for any cross braces or lateral supports. The strength of iron braces for bridges or floors are to be calculated on the principle above illustrated, as will be shown in our next.

(To be continued.)

The Fruits of Sin.—Mr. Grund, writing from Europe gives a sickening picture of the state of society and morals in Berlin, Germany. He states that the city contains 12,000 criminals; 10,000 sick with diseases produced by vice; 10,000 prostitutes: 2000 illegitimate children (annually;) 1000 living in alms houses; 6000 paupers; 200 prisoners of the police; 1500 orphans; 6000 sick in hospitals; 2000 convicts of houses of correction, and 4000 beggars. It is probable that three-fourths of this wretchedness might be prevented by the prohibition intoxicating liquors.

Railroad Intelligence.

The Pennsylvania Railroad.—The books of subscription to this road, which is of such immense interest to the Philadelphians, were lately opened, and stock to the amount of $309,000 was taken up the first day, and there appears a determination to press the enterprise through. In the mean time the people of Pittsburg, are pushing the Connelsville route with every prospect of succes. The requisite amount of stock has been subscribed at Pittsburg, and letters patent have been issued by the Governor. These two roads are rivals, the former completing a line from Philadelphia to Pittsburg, and the latter, an extension of the Baltimore and Ohio road, and calculated to divert the Pittsburg trade to Baltimore. This road is the favorite with the citizens of Pittsburg.

Little Miami Railroad.—There is a rapid increase of business on this Road, and eventually it must become the main route of Eastern travel from the West and South-west. In a few weeks it will be open to Springfield, the termination of this road where it intersects with the Mad River and Lake Erie Road. The Summer arrangement is now completed, connecting at Sandusky City with a daily line of steamboats to Buffalo, so that travellers meet with no detention.

Portland and Montreal Railroad.—The construction of this road is now fairly under way at both ends of the line. The route for about thirty miles from Montreal has been definitely located, and is ready for contracts. At the south end ground has been broken, and preparations are made for forwarding the work with energy.

Hudson River Railroad.—We hear but little said recently on this subject, but are informed that the Directors and Commissioners have delayed opening books of subscription in order to present to the public such statements, based on critical surveys, and other data, as will induce a very general subscription to the stock, when the books are opened for that purpose: and that they express perfect confidence in the entire success of this important work.

Northern Railroad.—The first annual report of the Directors of the Northern Railroad—the railroad from Concord, N. H., to the western bank of Connecticut river, near the mouth of White river—has been published. The route is 68 miles in length, and the maximum grade is fifty feet to the mile. Considerable progress has been made in the work, and at this time about 1200 hands are employed upon the line. It is expected that the lower eighteen miles—from Concord—will be completed this year.

Vermont and Massachusetts Railroad.—We learn that a contract has been made by the Directors of this corporation for iron sufficient to lay fourteen miles of their track between Fitchburg and Athol, at the low rate of $76 50 per ton.

Lexington (Mass.) Railroad.—The grading of this road is completed, and everything is ready for laying the rails. The rails have been made at the Montour works in Pennsylvania, and has probably arrived ere this, at Charlestown, and will be laid with all possible dispatch.

Jumble.

One of the greatest crimes of the clergy is said to consist in neglecting to denounce in the most pointed terms the sin of cheating the printers.——In 1787 there were 32,000 females confined for life in the various convents of Spain.——Two hundred clocks per day are manufactured at the several manufactories in Connecticut.——The Nashua, N. H., manufacturing Corporations make semi-annual dividends of ten per cent.——The planet Venus may now be seen by the naked eye, between 8 and 11 o'clock in the morning, fifty or sixty degrees in advance of the sun.——The highest tax paid by one individual in Boston is $6,507; the highest in New-York is about 34,000; the highest in Cincinnati not far from $8,000.——Pat Tool has been held to bail in Cincinnati, for menacing his wife. He must be a poor tool.——The establishment of telegraphic lines has the effect to start up several daily papers, in places where such things were not thought of until recently.——The N. Y. Evangelist admits that the world is ahead of the church in moral reform, and admonishes the church to come up to the standard of the world.——A fellow in Albany has been sent to the house of correction for 60 days, because he had a good trade but was too lazy to work.——The number of emigrants from Europe to the United States, is estimated, for the present year at about 200,000.——Three horses have lateley been killed, by the engines on the Eastern railroad near Boston.——Gen Vega has asked permission to visit different parts of the U. S. It is thought the request will be granted.

Benevolence.—Under this absurd head, we find in several of our exchanges, an account of several large bequests of money, made in the will of a deceased rich man in Newark. Now in the name of all common sense, we should like to know what benevolence there can be in the donations of hoarded wealth to missionary societies and Presbyterian churches, by a dying old bachelor who had hugged his riches as long as he could possibly control and keep it from doing any good: Of all cases in this hypocritical world, we know of none more decidedly contemptible, under the pretention of liberality.

A Powerful Demonstration.—"Yes, Mr. Chairman," said a modern political orator, "I repeat the declaration—I do not believe there is a man, woman, or child in this house, who has arrived at the age of fifty years, and upwards, but what has felt this truth thundering through their brains for centuries—I don't!"

Wooden Pavements.—A part of State street, Boston, is being paved with chesnut blocks. The blocks are of improved shape, and are said to be kianized with a solution of corrosive sublimate.—We are not yet fully prepared to believe that the sublimate is any more effectual as a preservative than various other cheaper saline preparations.

Variety

Mr. C. W. Green, of Roxbury, Mass., has established an improved egg factory, which produced 500 eggs per month during the coldest weather.—He keeps his hens in a warmed house.

An exchange paper says it is as hard to tell when moderate drinking ends and drunkenness begins, as to tell when a pig ceases to be a pig and becomes a hog. A fair comparison.

Close and continual application of mind produces a kind of distance and abstraction of manners which is often mistaken for haughtiness. Some wise man said that.

The way to prevent getting crossed in love, is to love very moderately till you have made sure of your object, and then let on all you know. So says the Sunday Atlas.

An extensive woollen manufactory has been recently erected in Richmond, Va. It is said that some of the women earn eighty cents per day: but whether *they* receive it, report does not say.

The village of St. Catharines, U.C., which in 1827 contained only 330 inhabitants, now numbers 3,400. This extensive increase is attributable to the Welland Canal.

A paper in Philadelphia, edited by colored men, says that "if a white girl is sober, careful and industrious, she should be as much respected and taken care of as a colored woman."

Iron castings may be bronzed by thorough cleaning, and subsequent immersion in a solution of sulphate of copper, when they acquire a coat of the latter metal. They must be then washed in water.

A cargo of plows manufactured at Chicago, Ill., was lately shipped from that port for Wisconsin Territory. The circumstance attracted much attention and drew some quaint remarks.

A large piece of rock was recently thrown through the walls of a dwelling house in Greenfield, Mass., by a blast on the new railroad. It is reported as an instance of *house-breaking*.

The best mode of cleansing jewelry or gold ornaments, is to wash it with castile soap-suds containing ten drops of ammonia (sal volatile) to a gill of water.

A Michigan paper complains of the difficulty of procuring the improved agricultural machines, particularly the horse-rake. Some Yankee plow makers might do well in that State.

A rich fool in England has given a sum equal to $115,000 for the purpose of establishing two new *Bishoprics*; one at the Cape of Good Hope and the other at Australia.

A gentleman in Charleston, S.C., has invented a Phonetic Telegraph which conveys intelligence by sounds. It requires several wires, and is not esteemed a very valuable improvement.

The wires of the Magnetic Telegraph have in some instances, indicated the approach of a thunder storm, by a spasmodic action, two hours before the clouds appeared.

A tradesman imagining and believing himself to be a seven-shilling piece, advertised himself thus: 'If my wife ever presents me in payment don't change me.'

The appropriations in England for the army and navy, and the payment of interest on the National Debt, for the current year, is upwards of two hundred and twenty-five millions of dollars.

A steamer is being built at Wilmington, Del., to be propelled by McConnell's propellers, and is expected to accomplish 25 miles per hour. There may be disappointments.

The furniture of Gen. Arista, which was captured by the Americans, consisted of a silk bed and curtains, and a variety of silver plate, strongly contrasting with Gen. Taylor's furniture.

The expense of collecting debts in this country is estimated at $200,000,000 per annum: quite enough to balance all the benefits derived from the credit system.

Fruit of monstrous size, such as gooseberries three inches in circumference, and strawberries about the size of eggs, continue to be reported in our western exchanges.

There are now living in Hadley, Mass., and within thirty rods of each other, five persons whose united ages amount to four hundred and thirty-five years.

Timothy Pillsburg was formerly a representative from Eastport, Me.; he is now a representative in Congress from Texas, the opposite extreme of the Union.

Two trains of cars running at great speed, on the Troy and Schenectady railroad last week, met and smashed each other to pieces. No person was killed.

Five judges were recently imprisoned at Frankfort, Ky., for refusing to appear before the Court of Appeals, and show cause why a jailor whom they had discharged, should not be restored.

During a thunder storm last week a house was struck by lightning in Portsmouth, N. H., and a cat was killed in the arms of one of its inmates without injuring the person who held it.

Patrick O'Brien, who was recently pardoned by the Connecticut Legislature, made his escape from the State Prison before the notice of his pardon had reached the prison.

An expert bottle maker at the English manufactories, will begin and finish fifteen hundred bottles in ten hours, with the aid of a blower and gatherer.

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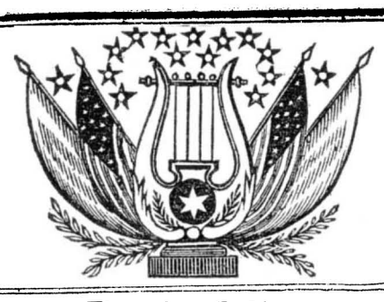


There is a God!

Deny it not! there is a God
Who watches o'er the earth,
By whose Almighty power 'twas formed
And ushered into birth.
His power is felt in every clime,
Wherever man has trod,
And all his works proclaim and chime
"There is—there is a God!"

Go to the solemn solitudes
Where Nature holds her reign,
In all her grandeur wild and rude,
O'er valley, hill, and plain;
Or to the mountain's tow'ring peaks
That pierce the passing cloud,
And all, tho' silent, plainly speak—
"There is—there is a God!"

The whispering zephyr, and the winds
The howling tempests send,
The flowers that bloom and birds that sing,
The glorious faith defend:
The brook that ripples on its way,
And cascade roaring loud,
In unison with conscience, say
"There is—there is a God!"

Who that beholds the starry skies,
Or yet the glorious sun,
Or hears the ocean's roar, denies
There is a ruling ONE?
When lightnings flash and thunders break
Beneath Jehovah's nod;
When heaven frowns, that heart will quake
That doubts—"There is a God!"

When death with stealthy step has come
In all his dreaded gloom,
And taken from our happy home
A loved one to the tomb;
And when we've seen that loved one laid
Beneath the silent sod,
Has not the bleeding bosom said
"There is—there is a God!"

When in adversity's dark hour—
When love of earth has sped,
And earthly pleasures and their pow'r
To please the heart have fled;
Or when in hopeless grief we've groaned
Beneath afflictions rod,
Has not the heart in silence own'd
"There is—there is a God!"

Though unbelieving skeptics rail
Against Almighty power,
The courage of their hearts will fail
When comes the trying hour;
When death with unrelenting grasp
The feeble form has bow'd
Upon its final couch, they gasp—
"There is—there is a God!"

The Field of Battle.

The flag is furled, the cannon hushed,
The work of slaughter done:
A well-fought battle has been lost,
A gallant victory won.

Thick as the forest leaves that fall
When autumn winds sweep by,
The dead upon the plain around,
Gashed and unburied lie.

The aged mother may no more
Behold her son's glad face;
Sorrow within the childless home,
Shall fill his vacant place.
In vain the wife will vigil keep,
Her lord's return to hail;
The music of the bower of love
Shall be the widow's wail.

The cherished offspring wont to climb
A watchful father's knee,
Is helpless, friendless, left to prove
The cold world's charity.

The laurel wreath, and man's acclaim,
Cannot absolve from guilt;
But lighter than a feather weigh,
Against the life-blood spilt.

O ye who rule, and whose command
Unsheathed the battle sword,
A Judge impartial and all-wise,
Will mete out your reward.

Pleasure in Sobriety.

Man little thinks
That while he drinks,
And quaffs the flowing bowl,
He breeds dull care,
Creates dispair
In future for his soul.

Man little knows,
When thus he throws
His sorrow to the wind,
He sows a seed,
Will only breed
More deep in memory's mind.

Then leave your wine,
Though 'tis divine,
Enjoy a sober smile;
It has no smart
But cheers the heart,
And lasts a longer while.

FRENCH PUNCH.—Said a Frenchman to a barkeeper, "Give me von leetel,—vat you call—" and hesitating in his speech, gave the barkeeper, an illustrative punch in the side. "Hallo, Monsieur," said toddy stick: "better mind how you punch gentlemen." "Ah, dat is it," said Monsieur, "give me some *punch*."

A NOBLE COW.—Mr. E. Hinckley, Mass., rejoices in the possession of a cow which, during one week in June, gave 180 quarts of milk, averaging nearly 27 quarts per day.

Selected Articles.

QUACKERY.

Mantaccini, the famous charlatan of Paris, was a young man of good family; and having in a few years squandered a large estate, and reduced himself to beggary, he felt he must exercise his ingenuity, or starve. In this state of mind he cast his eyes around the various devices which save from indigence, and are most favored by fortune. He soon perceived it was Charlatanism, on which this blind benefactress lavished her favors with most pleasure, and in the greatest abundance. An adroit and loquacious domestic was the only remaining article of all his former grandeur; he dressed him up in a gold lace livery, mounted a spleudid chariot, and started on a tour under the name, style, and title of the celebrated Dr. Mantaccini, who cures all diseases with a simple touch or simple look. Not finding that he obtained as much practice as his daring genius anticipatod, he determined to resort to still higher flights. He left Paris, and modestly announced himself at Lyons, as "the celebrated Dr. Mantaccini, who revives the dead at will." To remove all doubt he declared that in fifteen days he would go to the common churchyard, and restore to life its inhabitants, though buried for ten years.—This declaration excited a general rumor and murmur against the doctor, who, not in the least disconcerted, applied to the magistrated, and requested that he might be put under a guard to prevent his escape, until he should perform his undertaking. The proposition inspired the greatest confidence, and the whole city came to consult the clever empiric and purchase his *banme de vie*. His consultations were numerous, and he received large sums of money. At length the famous day approached, and the doctor's valet, fearing for his shoulders, began to manifest signs of uneasiness. "You know nothing of mankind," said the quack to his servant; "be quiet." Scarcely had he spoken these words, when the following letter was presented to him from a rich citizen. "Sir, the great operation which you are about to perform, has broken my rest. I have a wife buried for some time, who was a fury, and I am happy enough already, without her resurrection. In the name of heaven do not make the experiment. I will give you fifty louis to keep your secret to yourself." In an instant after, two dashing beaux arrived, who, with the most earnest supplications, entreated him not to raise their old father, formerly the greatest miser in this city, as in such an event, they would be reduced to the most deplorable indigence. They offered him a fee of sixty louis, but the doctor shook his head in doubtful compliance. Scarcely had they retired when a young widow, on the eve of matrimony, threw herself at the feet of the quack, and with sobs and sighs, implored his mercy. In short, from morn till night, the doctor received letters, visits, presents, fees, to an excess which absolutely overwhelmed him. The minds of the citizens were differently and violently agitated, some by fear, and some by curiosity, so that the chief magistrate of the city waited upon the doctor, and said, "sir, I have not the least doubt from my experience of your rare talents, that you will be able to accomplish the resurrection of our church-yard the day after to-morrow, according to your promise—but I pray you to observe that our city is in the utmost uproar and confusion, and to consider the dreadful revolution the success of your experiment must produce in every family; I entreat you, therefore, not to attempt it, but to go away, and thus restore tranquility to the city. In justice, however, to your rare and divine talents, I shall give you an attestation, in due form, under our seal, that you can revive the dead, and that it was our own fault we were not eye-witnesses to your power." This certificate was duly signed and delivered to Dr. Mantaccini, who left Lyons for other cities to work new miracles. In a short time he returned to Paris, loaded with gold, where he laughed at the popular credulity.

FEMALE LABOR.—The labor of one person ought to command the same price as the labor of another person, provided it be done as well and in the same time, whether the laborer be man or woman. A thousand of type, properly set in a stick and deposited on a galley, a thousand stitches in a waistcoat, by a girl, are worth as much to a master tailor or printer, as if the work were done by a man, and ought to be paid as well. Those who have employment, fit for woman, to bestow ought to give them the preference; for there are fewer occupants of which they are capable, and they need help and encouragement more than men.

Away with the mean prejudice and jealousy which sneer at women for trying to get an honest living. Girls, deprive journeymen of employment, and the latter cry aloud in consequence. As well might the Mississippi boatmen protest against steamboats. Say that this or that is not a woman's place or a woman's business? Has poor woman no fit place but the kitchen or the factory? Can her hand wield no implement but the needle and the dishcloth? Is she created only,

"To suckle fools or chronicle small beer?"

Was her tongue given her only to sing or scold babes to sleep? The fit place and the proper employment for male and female are that employment and that place for which they are best fitted by bodily powers, character, intellect, and education.

THE ISRAELITES IN GERMANY are in great commotion. At Berlin and Frankfort two-thirds of them have separated from the synagogues, to form new societies, and it is thought that their example will be generally followed. The new school are supported by the government; they celebrate the Sabbath of the Christians, and worship with chaunts, the music of the organ, and sermons. Sir Moses Montefiore, backed by the Rothschilds, is about establishing a Jewish colony in Palestine, and has obtained an ukase from the Emperor Nicholas, authorising the emigration thither of ten thousand Russian Jews.

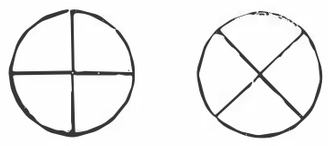
'Our town is really and in fact looking up.'—*Woburn (Mass.) Gaz.*

Of course it must be on its back.

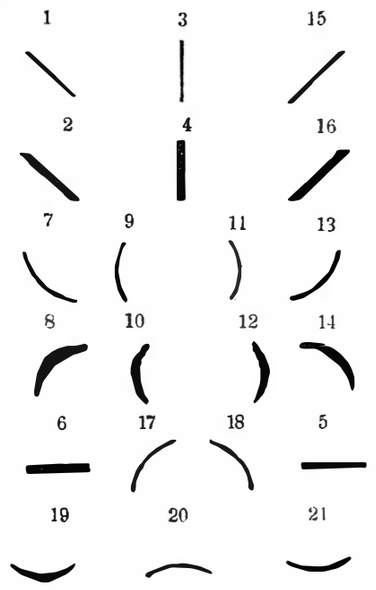
Pitman's Phonography.

We introduced this subject several weeks since, and promised to examine the different systems in use, to see which was entitled to the preference. This we have done, and have no hesitation in deciding that Pitman's system, for the purpose of reporting speeches, or facilitating business correspondence, is preferable to any other system that has been introduced; but on account of an excessive press and variety of business, and of other subjects that required attention, we have neglected the illustration of this system, till several of our readers have expressed some impatience in sundry communications on the subject. We are now prepared, however, to present the subject in a form to give our readers a chance to learn and practice this valuable art, by themselves.

In Mr. Pitman's system, instead of using characters to represent the letters of the common alphabet, he employs various figures or signs to express the elementary consonant sounds, with occassional dots or dashes to designate the vowel sounds in combination therewith. The several figures selected to express the consonant sounds, are all found combined in two quadripartite circles thus:



These two figures, it will be observed, comprise eight different positions of a curved line, and four different positions of a straight line, making in all twelve; and these figures are further diversified by being made heavy or light, thus making 24 different signs in all. Of this number, twenty-one are used to express the different consonant sounds thus:



EXPLANATION.—1, P: 2, B: 3, T: 4, D: 5, K: 6, G, as in *Go*: 7, F: 8, V: 9, TH as in *Thick*: 10, TH as in *This*: 11, S: 12, Z: 13, SH: 14, ZH or S as in pleasure: 15, CH: 16, J: 17, L: 18, R: 19, NG: 20, M: 21 N.

One point of excellence in the application of these signs, and to which we would call particular attention, is the similarity of the sounds indicated by the light class of signs, to those of the corresponding heavy lines: for example, it may be observed that the sound of P has the same relation to that of B, that T has to D, or K to G: and there is an equal similarity in the sounds of F and V: TH as in *think*, or as in *this*: or S and Z. On account of this similarity of sounds indicated by similar signs, there can be no danger of inconvenience by mistaking a light for a heavy line, or vice versa.

(To be continued.)

For the Scientific American.

MR. EDITOR,—Having seen in the Scientific American, a scrap taken from the Lafayette Statesman, on spelling the word Lafayette 32 different ways, it says, if any other town in the United States can be spelt in as many different methods as the following, *all wrong*, yet bearing a sound sufficiently accurate to designate the place, *we knock under*. The town of Aldie Loudoun Co., Va., is and can be spelt more different ways, than any other town in the U. S. I think, all wrong, yet sufficient to designate the place. So says the postmaster:

Allday, Alldie, Awlday, All Dee, Alde, Olde, Awlde, Holdey, Oldey, Aulde, Alldey, Haldey, Oldie, Awldie, Aldy, Auldy, Aldee, Oldee, Allda, Awlda, Olda, Haldee, Alda, Auldee, Alldea, Oldea, Oldy, Holdy, Aldey, Awldey, Haldie, Auldie, Aulday, Holdie, Alldy, Awldy, Haldy, Auldea, Awldea, Olday, Haldea, Aldea, Holday, Auldey, Aulda, Holda, Alway, Holdea, Allde, Holde, Halday, Halde, Awldee, Holdee, and last Hawldee, Lawden Kounty, Stayt of Verginny.

Aldie, Va., June 12, 1846.

RELIGIOUS DOGS.—Jesse relates an anecdote of a favorite dog which had been accustomed to accompany him to church; but this being objected to by his parents the dog was once or twice shut up at home to prevent his going with Jesse; but after this the dog evaded this restraint by concealing himself every Sunday morning, and was regularly met at the church door, or was found under Jesse's seat in the pew. Mr. Southey relates that a dog which had been owned by a Catholic, but afterwards sold to a Protestant, continued to refuse to eat meat on Fridays.

SAGE ADVICE.—If you would seek the good will of the fair sex, never dwell upon the beauty of any particular lady, however fair she may be, for those present will always conceive that it is an injurious comparison made between them and the object named.

If your sister, while tenderly engaged in a tender conversation with her sweetheart, requests you to bring her a glass of water from the adjoining room you can start on the errand, but you need not return. You will not be missed."

"A Natural Universal Alphabet."

(Communicated.)

An article under this title by J. V. W., in the Scientific American of July 2d 1846 merits a few remarks. Like many of his predecesors in the same field, the author seemed not to have devoted sufficient attention to the subject. It would certainly conduce to the advancement of mankind, were the articulate sounds, which are made *by the same organs* "all spelled according to a natural, fixed, and invariable principle." But the system proposed is deficient in several important particulars.

For the last twenty years an alphabet combining these qualities as far as the ordinary Roman alphabet admits, has been in extensive use in every part of the world, having been introduced by the good sense of American missionaries and others. The chief recommendation of this alphabet is that it is "natural," in giving the *universally acknowledged* powers of the vowel characters.

The system of Mr. W. could not, by any possibility, be advertised in Europe—among the Indians of America, or in the Sandwich, or other Pacific isles. Common sense rebels against taking the Roman alphabet and peverting almost every vowel sound, and the *people* whom so many wish to keep in ignorance, would also rebel if they were honestly in possession of the facts. The people are virtually told—"*You* have no right to be able to read German, Italian, Latin, Hawaiian, Delaware, or Mandingo properly; we will therefore make you believe that the English vowels, especially those copied from Low Dutch, are the only true ones.—We will practice on your credulity so far as to assert that the English *I* (eye) is a *vowel!* whilst *oy* is a compound. You must not be informed that the principal vowels have their proper sound in many English words, as *ah* in *far*; E in *there, they, vein*, from the Latin *vena* (*vana* in English orthography) *veil* (Latin *velum*); I in *field*; O long in *moan*, short in *note*; U long in *rule, boon*, short in *full, foot*."

In Latin, Italian, and German, the vowel character *i* had a second power equivalent to the English *y* in *ye*, and on this account it was lengthened to *j*, as in *hallelujah*, and in the Hebrew, the initial of *Jehovah* is pronounced as if written *Yehovah* in English. The character *j* has been perverted in French, Spanish, and English, each giving it a different value. When a character like this is invented for a particular purpose, it should not be altered, and we would conform to "universal" usage by rejecting *you* for *ju*; *union* for *junj'n*, &c. inserting a vowel resembling *o* and *u* in the last.

The English pronoun I is not a "compound vowel," being the union of the short *ah* in *arm* with *y* in *ye*, whence it should stand *ay* or *aj*. In foreign languages it is usually written *ai*, as in the German word *Kaisar*.

The dipthong in *now* is *ah*, and English *w* in *we*. The word *now* is from the German, where it is written *nau*; and *house* takes the form *haus*. It is difficult to understand why some are so anxious to represent *two* sounds by *one* character, as in the dipthongs, thus employing characters which should be left for other sounds. The letter *q* fo example, properly belongs to an Arabic letter, and *x* to the German *ch*.

The consonant sound in *thin* has a certain relation to that in *tin*; so has *th* in *they* to *d* in *day*.—Now if it be proper to retain *th* for one of these, the preference should be given to the former; and uniformity would have been preserved by writing *dhis* for *this*, as of yore. But Mr. W. throws aside the "natural" order by using *th* for *dh*, and giving an inappropriate character for *th* in *thin*.

The very distinct sound of *wh* in *when*, Mr. W. has overlooked or misunderstood. Some think it equivalent to *h* and *w*, as in *hwen*. But *w* in *wen* is vocal, whilst *wh* or *hw* is whispered! The sound of *ng* is equally unfortunate. It has no relation to *n*, as may be demonstrated by pronouncing *ni, ngi*, consecutively. Their relation is that of *t* to *k*.

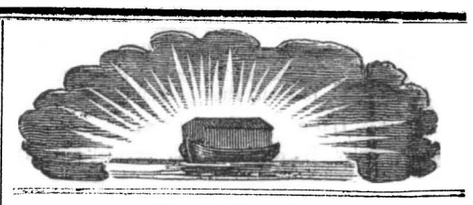
Mr. W. speaks of reading a foreign language as correctly as a native, but his own alphabet will not enable one to write even English or Scotch with this perfection. He takes notice of the length and quantity of the vowels only in the case of U (oo) in *rule, root*; and *aw* in *law, lot*; whilst the similar relation of O in *cone, coat*; of I in *mien, meat*, and others, are overlooked.

The A in *far* is not mentioned, or is confounded with *a* in *fat*, which is a different letter. The stigmatizing of certain articulate sounds as "brutish gutteral noises" (merely because *we* are without them) is in very bad taste, and the author who holds such local, contracted views, can hardly be a competent judge of what is likely to be required in a universal alphabet. He would not be likely to see any use for more than one L, and might consider that of the Welsh, and the two additional Polish varieties, as "unworthy to be dignified with the name of *speech*."

Now that there is likely to be a reformation in orthography, care must be taken that the system be such as can be adopted by all the nations of Europe, or each will reform its own orthography independently. It is to be regretted, that whilst so many are engaged upon this work, there has been so little interchange of opinion previous to publication; but we may still hope that an eclectic system may arise out of the present materials, no one of the existing alphabets now before the public being likely to be adopted as a whole. HESPERUS.

LONGACOMING.—This is the significant and musical name of a small pleasant village in New Jersey, about 15 miles southeast from Philadelphia.—A longacoming mail-stage runs through the town, and an old fashioned tavern furnishes longacoming dinners to passengers. The name of the place is said to have been given by some sailors who had walked up from Little Egg Harbor without drinking by the way.

VERY PROVOKING—having conceived a capital idea,—written a bright article—put it in type, and sent it to press—to discover that 'a contemporary had published the same idea, and expressed n nearly the same words on the day previous.



The Millerites.

Continued from No. 41.

We shall not follow all the various branches and sects of those who are called Millerites, into all their wild, extravagant, and irrational theories, and discordant systems,—at least not at present,—but briefly illustrate the views, theory, and principal arguments of the few who adhere to the original faith and principles of Mr. Miller, but have fixed on another definite and limited period of time, within which the prophetic periods will terminate, and Christ will appear in his glory; though it is perfectly evident, and admitted even by themselves, that however sanguine they may be, or however clearly they may demonstrate the correctness of their present views, it is impossible for them to gain sufficient credence as to produce another excitement in the minds of the public. With regard to the general principles of their faith, they believe that 'all scripture was given by inspiration of God;' especially the prophetic part; and that the prophecies were intended and calculated to be useful and instructive to mankind, even the common people, who dilligently apply themselves to the study thereof: and that the scriptures having been written by inspiration of a Being who is infinite in wisdom, and understood perfectly from the beginning, what changes of language would take place, and to what various translations the Scriptures would be subjected, caused them to be written in such a manner as to be as readily understood in our language as in the original, or as it was originally designed that they should be; and that any person who dilligently studies them, comparing one part with another, and each with the whole, may understand the true original import thereof, as well as the deep-learned, aristocratic bishops and doctors of divinity, and not be dependent on the dignified heads of popular artificial churches to expound them. They believe that the deep, sublime, and most interesting prophesies, were not intended to be understood by an indifferent, casual reader; but that it is the duty of every person who can read, to search and study the scriptures with close attention and with prayer.—They believe that there is a class of prophesies, or prophetic periods of time given, which were to be for a limited time, sealed up or hidden from mankind; but that the time has now arrived in which, according to an accompanying prediction, these periods should be understood by those who should feel so much interested in the subject of the events which should take place at the termination of those periods, as to apply themselves to the study thereof; and that the time for the termination of those several periods, and for the occurrence of those events, is now definitely understood. They also hold that it is the duty as well as privilege of all believers, to inform themselves concerning these times, and thereby avoid the censure or reproof which was evidently implied in several instances in the New Testament; (Luke xii. 56, and xxiv. 25) and argue that all who truly love the Savior should love his appearing, and feel interested to know whatever may be known concerning the time. They also contend that it was necessary for the fulfilment of the prophecies, that those who look for His coming should be disappointed once or more on the subject, that the event should appear to "tarry," as mentioned in Hab. ii. 3; and that the world should become settled in security, and scoffers should find occasion to say, "Where is the promise of his coming?" And it is said that if the abundant and positive evidence concerning the time, had appeared as conspicuous in 1843 as it does now, the world would have become alarmed in a manner altogether inconsistent with the prediction that the event should come as a snare upon the world.

Among the combinations of evidence held forth by these Millerites concerning definite time, it is said to be fully established by different chronological tables—in which all astronomers agree,—and by the records of divers eclipses of the sun and moon, in connection with plain Scripture statements, that the 2300 days (prophetic) mentioned in Dan. viii. 14, terminate in 1846: and that this also corresponds with the termination of the 1335 days of Dan. xii. 12; but the connection of these arguments and evidences adduced to establish this point, will be given more at length in our next number.

(To be continued.)

BURNING A YEAR.—The great fire of July 19th, 1845, is not yet fully extinguished; smoke still continues issuing from the ruins, as was noticed by hundreds on the 4th inst.

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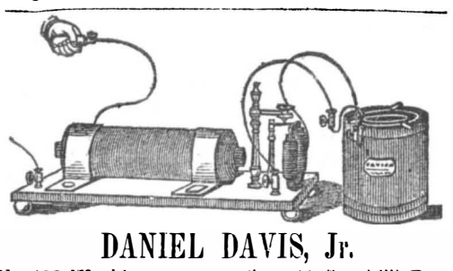

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ILLUSTRATED BOTANY.

Edited by JOHN B. NEWMAN, M. D.

Circumstances make the man, and very often, as in the present case, the book. For years there has been a steadily increasing interest felt for the vegetable kingdom. Latterly this taste has been partially gratified by the literary magazines, which owe their popularity, in a great measure to the beautiful flower prints that adorn them. One specimen a month, however, is not enough, nor is it required in such connection. A work relating exclusively to the subject, is wanted by the public, and this want, the present enterprise is intended to supply.

Preceded by a short introduction on Physiology, and a view of the Natural and Linnæan Systems, the work will be devoted to a separate consideration of each plant.—Together with our own information, we shall draw on the standard works on Chemistry, Botany, and Medicine, combining every useful item of knowledge, and without lessening its value, present it in a concise and pleasing form. Obtaining our supplies from the same sources as the bee, we hope to *secrete* as elegant a sweet for the mind, as it does for the body. The properties of each, more especially the medicinal, will be confirmed, in a great number of instances, by personal experience. To this will be added its history; its meaning in the language of flowers; and poetry, either original or selected from the gems of the children of song.

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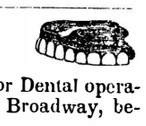

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" Chicken,	18d	Veal Pie,	6d
" Duck,	18d	Beef Steak Pie,	6d
" Beef,	6d	Chicken Pie,	12d
" Pork,	6d	Mush and Milk,	6d
" Veal,	6d	Rice and Milk,	6d
" Lamb,	6d	Lamb Pot Pie,	6d
" Pig,	12d	Fried Fish,	6d
Boiled Chicken,	12d	Fried Clams,	6d
" Mutton,	6d	Ham and Eggs,	12d
" Corned Beef,	6d	Chicken Soup,	6d
" Pork,	6d	Beef Soup,	6d
" Fish,	6d	Coffee,	6d

Dessert.

Suet Pudding	6d	Mince Pie,	6d
Indian Pudding,	6d	Apple Pie,	6d
Rice Pudding,	6d	Peach Pie,	6d
Plum Pudding,	6d		6d
Bread Pudding,	6d	ui e,	6d
Apple Dumplings,	6d	Custard Pie,	6d

Breakfast and Tea.

Beef Steak,	6d	Hot Corn Bread,	6d
Veal Pie,	6d	Indian Cakes,	6d
Mutton Chops,	6d	Boiled Eggs,	6d
Ham and Eggs,	12d	Fried Eggs,	6d
Fried Tripe,	6d	Toast,	6d
Fried Sausages,	6d	Hot Muffins,	6d
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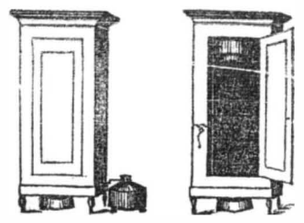

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